



6BN4—2BN4—3BN4

TRIODE

FOR VHF TV RADIO-FREQUENCY AMPLIFIER APPLICATIONS

6BN4
2BN4
3BN4
ET-T992B
Page 1
11-56

DESCRIPTION AND RATING

The 6BN4 is a miniature medium-mu triode primarily intended for use as a radio-frequency amplifier in VHF television tuners. The electrical characteristics of the 6BN4 are similar to those of each section of the 6BZ7.

Except for heater ratings, the 2BN4 and 3BN4 are identical to the 6BN4. In addition, they incorporate a controlled heater-warm-up characteristic which makes them especially suited for use in television receivers that employ series-connected heaters.

GENERAL

ELECTRICAL

	2BN4	3BN4	6BN4
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	2.3	3.0	$6.3 \pm 10\%$ Volts
Heater Current	$0.6 \pm 6\%$	$0.45 \pm 6\%$	0.2 Amperes
Heater Warm-up Time*	11	11	... Seconds
Direct Interelectrode Capacitances†			
Grid to Plate			1.2 μmf
Input			3.2 μmf
Output			1.4 μmf
Heater to Cathode			2.8 μmf

MECHANICAL

Mounting Position—Any
Envelope—T-5½, Glass
Base—E7-1, Miniature Button 7-Pin

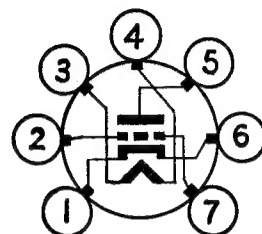
MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Plate Voltage	275 Volts
Positive DC Grid Voltage	0 Volts
Plate Dissipation	2.2 Watts
DC Cathode Current	22 Milliamperes
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	100 Volts
Heater Negative with Respect to Cathode	100 Volts
Grid Circuit Resistance	0.5 Megohms

Design Maximum Ratings are the limiting values expressed with respect to bogie tubes at which satisfactory tube life can be expected to occur. To obtain satisfactory circuit performance, therefore, the equipment designer must establish the circuit design so that no design-maximum value is exceeded with a bogie tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and environmental conditions.

BASING DIAGRAM

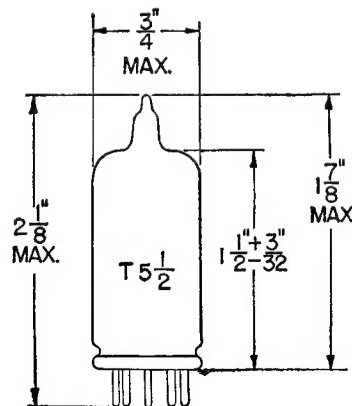


RETMA 7EG

TERMINAL CONNECTIONS

Pin 1—Cathode
Pin 2—Grid
Pin 3—Heater
Pin 4—Heater
Pin 5—Plate
Pin 6—Cathode
Pin 7—Grid

PHYSICAL DIMENSIONS



RETMA 5-2

GENERAL ELECTRIC

Supersedes ET-T992A, dated 4-56

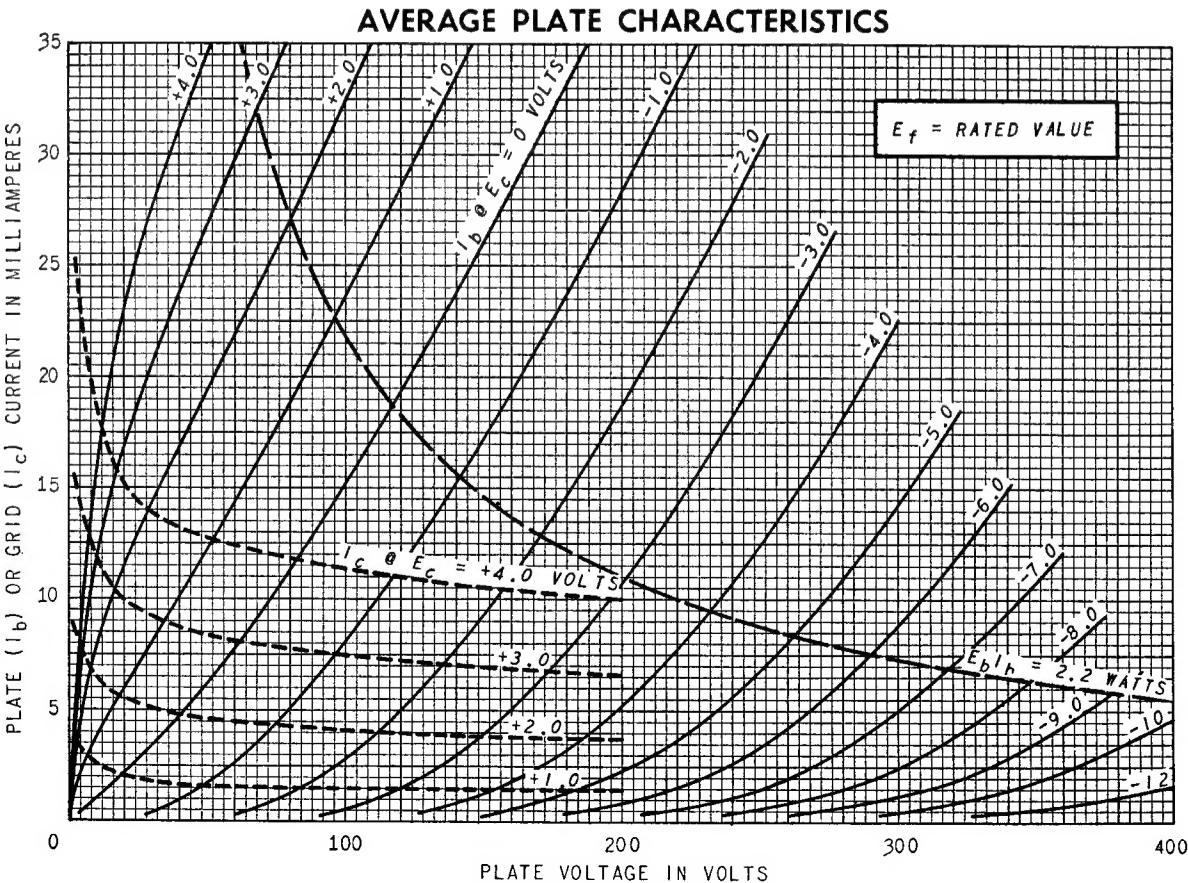
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

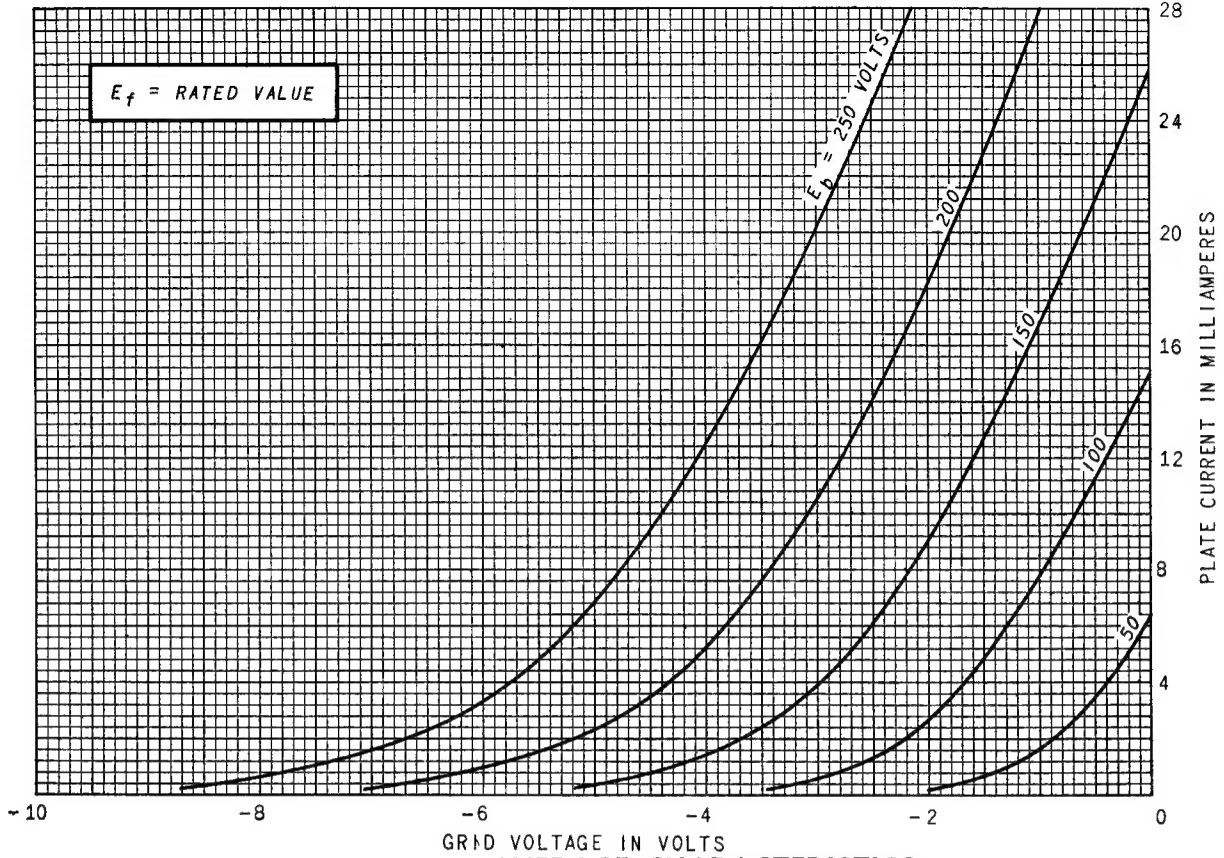
Plate Voltage	150 Volts
Cathode-Bias Resistor	220 Ohms
Amplification Factor	43
Plate Resistance, approximate	6300 Ohms
Transconductance	6800 Micromhos
Plate Current	9.0 Milliamperes
Grid Voltage, approximate I _b = 100 Microamperes	−6 Volts

* The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.

† With external shield (RETMA 316).



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS

